

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petitions of)
)
ATLANTIC RICHFIELD COMPANY, TEXACO,)
INC. AND UNION OIL COMPANY)
)
for Review of Orders Nos. 82-18, 82-40)
and 82-41 of the California Regional)
Water Quality Control Board, Central)
Coast Region. Our Files Nos. A-318,)
A-318(a) and A-318(c), NPDES Permits)
Nos. CA 0048844, CA 0048852 and)
CA 0048801.)
)

ORDER NO. WQ 83-2

BY THE BOARD:

On May 13, 1982, the California Regional Water Quality Control Board, Central Coast Region (Regional Board) adopted three NPDES permits regulating exploratory oil drilling operations to be conducted in the Pacific Ocean about one and one-half to three miles off Santa Barbara County. The permits were issued to Atlantic Richfield Company, Texaco Inc. and Union Oil Company. The permits allow each discharger to develop two exploratory wells and authorize the ocean disposal of drilling muds and cuttings provided certain conditions are met. Provision D of each permit states "[u]pon receipt of the Reconnaissance Survey Report, a receiving water monitoring program will be established for selected test drilling sites".

On September 10, 1982, the Regional Board voted to require an extensive receiving water monitoring program at each of the six sites. The petitioners seek review of this decision, arguing that requiring such detailed studies at all sites constitutes an improper

modification of their permits, is arbitrary and unreasonable, and contrary to Water Code § 13267(b).

I. BACKGROUND

A major issue regarding offshore oil development is whether ocean disposal of drilling muds and cuttings should be allowed or whether such muds and cuttings should be disposed of onshore.¹ A 1979 amendment to the Public Resources Code removed a flat prohibition against discharges of muds/cuttings to state waters if such discharges are under the authorization of a Regional Board. (Public Resources Code § 6873(b)).

The provision in the NPDES permits requiring a receiving water monitoring program for selected test drilling sites was the result of the Regional Board's concern that further studies were necessary to satisfy it that the discharges of mud and cuttings as permitted by the NPDES permit would not adversely effect the quality or beneficial use of ocean waters. At the time the permits were issued, the Board established an Oceanographic Technical Advisory Committee (OTAC) to design the studies and submit monitoring proposals to the Board for approval. The OTAC is comprised of a representative of the oil industry, an employee of the California

1. Drilling muds are the materials used in rotary drilling to lubricate and cool the drill bit, to carry cuttings up from the bottom, and to prevent blowouts and cave-ins by plastering and consolidating the walls with a clay lining. There are three main constituents. Commercial clay (usually bentonite) and water is mixed to produce the basic mud. Various chemical additives are mixed with the mud. Finally, additional substances come from the drill cuttings which are the soil, rock and formation fluids (water, gas, oil) through which the well is drilled.

Department of Fish and Game and a professor from the University of California at Santa Barbara.

The permits also required each discharger to submit a reconnaissance survey report of the drilling area and selected drilling sites to the OTAC and to the Regional Board for approval prior to discharge of waste materials to the ocean. These reports would show the similarity, if any, between sites.

On September 10, 1982, the Regional Board considered the receiving water monitoring program which was proposed by the OTAC. The Committee, with Regional Board staff concurrence, recommended that studies be conducted at two of the six drill sites -- one with a hard rocky bottom and one with a soft sandy bottom. The purpose of the program is to monitor and detect environmental changes in the sediment and benthic biota at each site. A study to detect changes in the water column also was to be implemented as part of the hard-bottom program. Each program, as proposed by the OTAC, is designed to take place over a one year interval. Baseline sampling is to take place before drilling. Other sampling is to take place during the drilling discharge and final sampling is to be conducted one year after the final discharge. The Regional Board voted to require the proposed studies at each of the six approved sites, rather than at only two sites.

The petitioners estimate that the cost of the studies will be about \$300,000 to \$400,000 per site. They argue that the action of the Regional Board in requiring such extensive studies was arbitrary and capricious, not supported by the weight of the evidence and contrary to Water Code § 13267(b) which requires that the burden,

including costs, of the reports required by a Regional Board, must bear a reasonable relationship to the need for the reports and the benefits to be obtained therefrom.

II. CONTENTIONS AND FINDINGS

Although each petitioner couches his objections in somewhat different terms, the essence of all the petitions is an assertion that the monitoring program required by the Regional Board is unnecessarily extensive. Our review and analysis of the record which was before the Regional Board has led us to a similar conclusion, although with certain reservations.

One of the petitioners' contentions is that the action by the Regional Board constituted a modification of the conditions of a permit without providing proper notice and a hearing as required by the California Water Code. Unfortunately, the wording of the relevant part of the NPDES permits is somewhat ambiguous. It is unclear whether at the time the permits were adopted the intent of requiring monitoring at "selected test drilling sites" was to have such monitoring conducted at all sites, e.g. at all the six sites selected for drilling, or at only some of the six sites. In any event, we are reviewing the propriety of the entire permit as it relates to the issue of monitoring and modifying the permits as a result of our review.²

In order to review the appropriateness of the monitoring program adopted by the Regional Board in the proper context, it was

2. To the extent that we are reviewing the NPDES permits which were adopted on May 13, 1982, this review is taking place on our own motion [Water Code § 13320(a)].

necessary to first consider the potential impacts of the proposed discharge of drilling muds and cuttings.

These impacts are discussed in several documents in the record before us.³ There appear to be three areas of potential impact from the discharge of muds and cuttings: Physical effects on marine life, bioaccumulation of trace metals, and the effects from the toxicity of drilling muds. Our review of the record regarding each of these potential effects has led us to support the need for an in-depth monitoring program at one soft-bottom and one hard-bottom site along with a water column program as proposed by the OTAC. These studies will be specific to the biota of the Santa Barbara Channel and include a long-term chronic effects evaluation. The recommended studies appear to be comprehensive and effective for obtaining the needed background data. The results should be helpful in establishing drilling mud monitoring programs for production drilling and will provide detailed background reference material for comparison with the large volume of literature available from east coast and gulf coast drilling studies involving similar physical oceanographic conditions.

In addition to the in-depth monitoring at the two sites, the OTAC and the Regional Board staff have proposed

3. See for example, the draft Environmental Impact Report for the Resumption of Exploratory Drilling Operations by the Shell Oil Company, Lease PRC 3314.1, Pierpoint Prospect - State Lands Commission, December 1980; Finalizing Addendum, April 1981.

and petitioner Union Oil Company is carrying out an alternative receiving water monitoring program for a third site. The third site program is utilizing different methods of monitoring. In addition to standard bioassay and chemical analysis of the drilling muds, this program will assess the bioaccumulation of drilling muds constituents by specified organisms. It also calls for a research program to evaluate a larval settling recruitment method for possible application as a monitoring tool for discharges of drilling muds in marine waters. We do have some concerns with the adequacy of such a research oriented program. However, since the Regional Board approved this third site program as fulfilling the receiving monitoring program requirements established in the NPDES permit and since the program is nearly complete, it would be unproductive to second-guess the third site program at this stage.

Although we agree with the petitioners' contention that comprehensive monitoring is unnecessary at all six sites, we conclude that there should be a somewhat less comprehensive monitoring program at each of the three remaining sites. This conclusion is based on the lack of site specific studies in the area, the need to verify the comprehensive studies and the importance of providing specific protection at each site. This program must include an initial reconnaissance survey disclosure of discharge contents prior to mud discharges, and monitoring before, during, and after drilling operations. This will provide basic information about the effects of the discharges at every site and will result in consistent monitoring

both at the sites in the Santa Barbara Channel and of sites⁴
in other regions.

III. CONCLUSIONS

We conclude that:

1. A comprehensive receiving water monitoring program should be conducted at one soft-bottom and one hard-bottom drilling site.
2. The research oriented monitoring program being carried out at a third site should be completed.
3. Less comprehensive receiving water monitoring programs should be conducted at the three other drilling sites.

IV. ORDER

IT IS ORDERED THAT, for the reasons discussed above:

1. Provision A.1. of NPDES Permits Nos. CA0048844, CA0048852 and CA0048801 is amended to read:

Discharge of waste materials to the ocean at the exploratory drilling site is prohibited until an acceptable reconnaissance survey report of the drilling site has been submitted to the Oceanographic Technical Advisory Committee and approved by the Regional Board. The objective of the reconnaissance survey is to provide information on habitats surrounding the well so that appropriate provisions can be required to protect those habitats.

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4. The proposed monitoring should, at a minimum, cover the same parameters as required by the EPA General Permit for Oil and Gas Operations on the Outer Continental Shelf off Southern California and NPDES Permit No. CA0059269 adopted by the Los Angeles Regional Board for Shell Oil Company at Pierpoint Prospect.

2. Provision D.1., of the above-cited permits is amended to read:

Upon receipt of the Reconnaissance Survey Report, a receiving water monitoring program will be established for each drilling site, in accordance with Order No. WQ 83- of the State Water Resources Control Board.

3. The monitoring and reporting programs for the above-cited permits are amended to delete the sections entitled "Receiving Water Monitoring" and "Reporting".⁵ Upon receipt of the applicable Reconnaissance Survey Report, the Executive Officer of the Regional Board shall approve a receiving water monitoring program and reporting schedule in accordance with this Order and the permit. One of the six sites shall be subject to an extensive monitoring program for a soft-bottom site, one of the six sites shall be subject to a comparable program for a hard-bottom sites and one site shall be subject to a research oriented program. These programs shall be established in coordination with the Oceanographic Technical Advisory Committee.

4. The remaining three sites shall each be subject to site-specific monitoring programs.⁶ The site specific

5. The provision of the section entitled "Reporting" which states "Results of toxicity bioassays shall be reported to the Executive Officer within 15 days after sample was collected" is hereby incorporated in the section of the Monitoring and Reporting Programs entitled "Discharge Monitoring-Drilling Wastes."

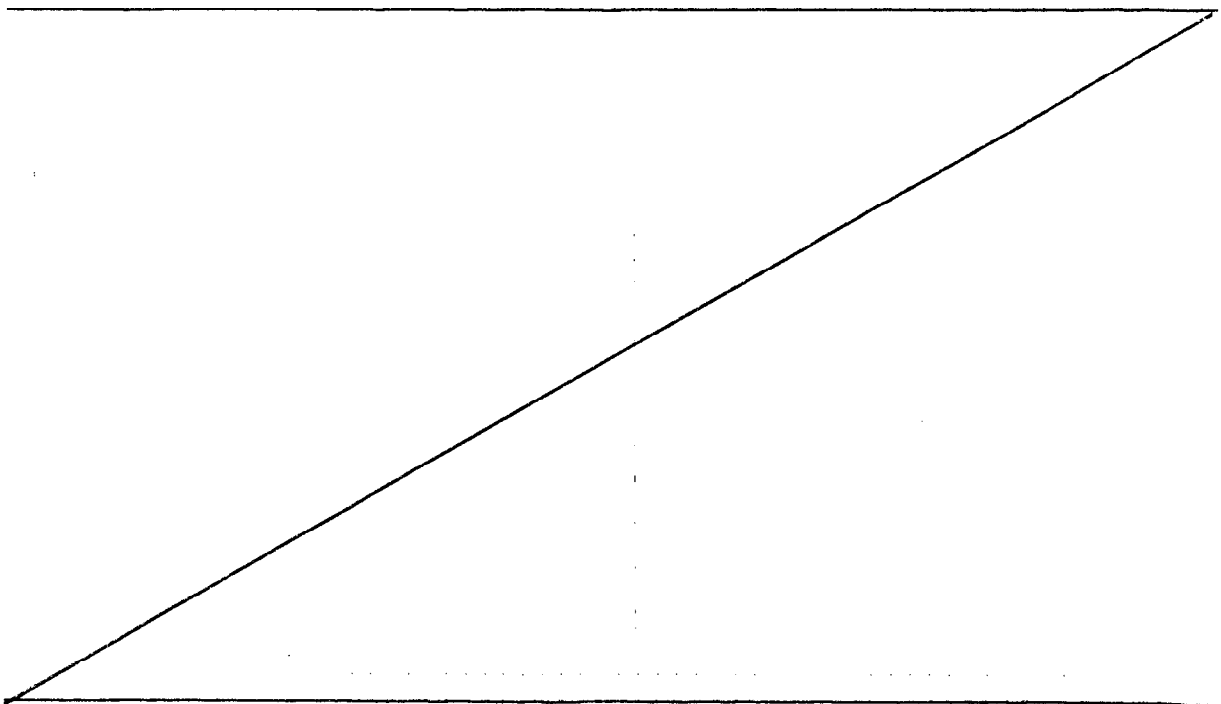
6. As with all monitoring programs, costs must be balanced against benefits to be obtained.

programs shall be established in coordination with the OTAC and shall be based on an initial reconnaissance survey and an analysis of the muds to be discharged. These programs shall be consistent with the following guidance:

(a) The monitoring programs shall consist of a water quality element and a benthic element.

(b) The programs shall be sufficient to determine whether the discharge is in compliance with permit requirements, to demonstrate any significant impacts of discharged materials on the beneficial uses of the receiving waters and to assess the impact of the discharge on the water columns and on benthic habitats.

(c) Benthic monitoring shall consist of (1) representative sampling and analysis of discharged muds and cuttings, and (2) representative sampling of the benthic community to determine biotic impacts.



(d) Water quality monitoring shall include sufficient sampling to determine discharger compliance with applicable water quality objectives and effluent limitations.

Dated: April 21, 1983

/s/ Carole A. Onorato
Carole A. Onorato, Chairwoman

/s/ F. K. Aljibury
F. K. Aljibury, Member

/s/ Warren D. Noteware
Warren D. Noteware, Member

/s/ Kenneth W. Willis
Kenneth W. Willis, Member